

ENVIRONMENTAL ASSESSMENT

FOR

A PROPOSED 4(D) RULE

ON THE

PREBLE'S MEADOW JUMPING MOUSE

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PURPOSE AND NEED

PURPOSE

The Fish and Wildlife Service proposes a special rule to define the conditions under which certain human activities occurring within the range of the Preble's meadow jumping mouse (*Zapus hudsonius preblei*) would not constitute take as described under section 9 of the Endangered Species Act.

NEED

The Federal action is needed pursuant to sections 4 and 9 of the Endangered Species Act to identify certain categories of activities for which take will no longer be prohibited for non-Federal actions.

SUPPLEMENTARY INFORMATION

The Preble's meadow jumping mouse (Preble's) was listed as a threatened species on May 13, 1998 (63 FR 26517). Section 9 of the Act prohibits the "taking" of a listed species. The definition of "take" includes harm, harass, injure, wound, or kill. Various human activities conducted within areas occupied by the Preble's, including the removal or modification of habitat, may result in take of Preble's.

The Preble's occurs in habitat adjacent to streams and waterways along the Front Range of Colorado and southeastern Wyoming. The species' habitat is the riparian zone, primarily defined by the 100-year floodplain, and adjacent uplands extending out about 100 meters.

There are many ongoing activities within the species range, where there may be substantial confusion regarding whether the species is present and whether the activity may take the species. We need to clarify for private landowners and other non-Federal entities what activities are likely to result in take of Preble's.

Private landowners conducting activities that result in take of Preble's would currently be required to obtain a permit under section 10 of the Act, through development of a Habitat Conservation Plan, or to modify their activities in a manner that would avoid take. Modifications to avoid take may be minimal or substantial, depending upon the nature of the activity. People may need information regarding what modifications are needed and how they should be done to avoid take. In situations where the amount of take is small, substantial effort would be made to reduce take with little benefit to the species. In order to avoid the need for such efforts and to provide clarity and guidance to the public to focus on conservation efforts in situations where the take is more substantial, it is important to prepare a 4(d) rule to exempt from take prohibitions those activities with the potential to result in small amounts of take.

Private landowners may have concerns about their legal liability for take of Preble's from actions conducted in Preble's habitat, even in situations where take is unlikely. This exemption provides clarification to private landowners and businesspeople that certain existing activities can continue without causing unauthorized take of the species.

Some landowners have over the years maintained riparian habitat that is occupied by Preble's. They may conduct their activities in such a way that a small amount of take occurs, but overall the habitat supporting the Preble's at those locations is being maintained by their management of the land. We believe it is important to recognize good land stewardship and the landowners' interest in conserving the Preble's, by providing exemptions for the small amount of take that may occur as a result of their ongoing land management activities.

Therefore, we propose to remove section 9 prohibitions on take of Preble's for certain categories of activities. We believe exempting these activities will benefit the species by reducing the need for intervention in situations where minimal levels of take are likely to occur, and by freeing private landowners and other non-Federal entities to focus efforts on activities that will more substantially contribute to the species conservation. We are not exempting activities that we believe may lead to more substantial levels of take. We are not proposing to apply these exemptions to actions undertaken by Federal Agencies. Federal Agencies will still have to consult with the Service as required by section 7 of the Act if their activities may affect the Preble's.

ALTERNATIVES

ALTERNATIVE A - The No Action Alternative

Under this alternative, no 4(d) rule would be developed. All prohibitions against take of Preble's under section 9 would remain in force. This means that all take of Preble's would be prohibited unless otherwise permitted through a HCP and associated section 10 permit.

ALTERNATIVE B - Action Proposed in 1998

This alternative is the 4(d) rule as proposed on December 3, 1998 (63 FR 66777). The 4(d) rule under this alternative would be in effect for 18 months. Under this alternative, areas throughout the species' range would be identified as either known or potential occupied habitat through the designation of Mouse Protection Areas (MPA's) or Potential MPA's (PMPA's). Take of Preble's resulting from activities that occur outside of MPA's and PMPA's would not be prohibited. Take of Preble's resulting from activities that occur inside MPA's and PMPA's would be prohibited, with the following exceptions—take could occur in an MPA where the local government (city, county, State) has agreed to review and approve projects within their jurisdiction to ensure that cumulative total impacts to Preble's habitat within the MPA does not exceed 4 percent and to assure that appropriate mitigation occurs. Also, prohibitions against take

of the species would not apply to four exempted categories of activities (rodent control, maintenance of existing landscaping, ongoing agricultural activities, and ongoing use of existing water rights) throughout the species' range.

ALTERNATIVE C - Rangewide Exemptions Only

This alternative exempts the same four categories of activities identified in Alternative B (rodent control, maintenance of existing landscaping, existing agricultural activities, and ongoing use of existing water rights) from section 9 prohibitions on take of Preble's. This alternative continues these exemptions for 36 months as opposed to 18 months under Alternative B. Alternative C does not propose delineating MPA's or PMPA's, it does not provide a mechanism for local government control of habitat loss within an MPA, and it does not propose exemptions related to take that occurs inside or outside of MPA's and PMPA's. These options were omitted in response to concerns raised in various comments from the public. Some comments indicated confusion regarding the intent of the MPA and PMPA designations and whether section 9 prohibitions applied within or outside the designated areas. Other comments raised concerns regarding the sufficiency of the information about Preble's distribution upon which the MPA and PMPA designations were based. They expressed concern that exempting all activities outside these areas might not provide adequate protection for Preble's that might, in the future, be found outside the designated areas. Also, there were concerns from various counties who indicated that county control of activities within MPA's, as proposed, was not practicable.

ALTERNATIVE D - Expanded Rangewide Exemptions (Preferred Alternative)

This alternative is similar to Alternative C, with the addition of two more categories of exemptions. This alternative exempts a total of six categories of activities from take prohibitions. These categories are rodent control, maintenance of existing landscaping, existing agricultural activities, ongoing use of existing water rights, ditch maintenance, and noxious weed control. Although Alternative B was the proposed action published in the Federal Register on December 3, 1998, (63 FR 66777), we now identify Alternative D as our Preferred Alternative. We plan to publish final regulations for the four rangewide exemptions proposed in 1998, and also propose the two additional rangewide exemptions added in Alternative D.

TABLE 1- SUMMARY OF ACTIONS BY ALTERNATIVE

TAKE PROHIBITIONS	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D
	All take prohibitions remain in effect. Take allowed under HCP/Section 10 permit	Certain activities exempt from take prohibitions. Other take allowed under HCP/Section 10 permit	Certain activities exempt from take prohibitions. Other take allowed under HCP/Section 10 permit	Certain activities exempt from take prohibitions. Other take allowed under HCP/Section 10 permit
Duration of Rule	N/A	18 months	36 months	36 months
MPA's/PMPA's	N/A	Yes	No	No
Rodent Control	N/A	Yes	Yes	Yes
Existing Agriculture	N/A	Yes	Yes	Yes
Existing Landscaping	N/A	Yes	Yes	Yes
Existing Use of Water Rights	N/A	Yes	Yes	Yes
Ditch Maintenance	N/A	No	No	Yes
Noxious Weed Control	N/A	No	No	Yes

AFFECTED ENVIRONMENT

The Preble's occupies shrub habitat adjacent to streams along the Front Range of the Rocky Mountains in Colorado and southeastern Wyoming. The species' range is confined to portions of seven counties (Boulder, Douglas, Elbert, El Paso, Jefferson, Larimer, and Weld) in Colorado, and five counties (Albany, Converse, Goshen, Laramie, and Platte) in Wyoming. The Preble's primarily occurs in and adjacent to riparian corridors along creeks that are dominated by shrubs (such as willow [*Salix* sp.] and snowberry [*Symphoricarpos* sp.] and intermixed grasses. Two additional species listed under the Act also occur within the same habitat. The threatened Colorado butterfly plant (*Gaura neomexicana coloradensis*) occurs along streams of the Front Range in northern Colorado and southeastern Wyoming and occupies many of the same streams as does the Preble's. A threatened orchid, the Ute ladies-tresses (*Spiranthes diluvialis*), occurs in sidechannels and ditches along streams in the Front Range and other scattered locations throughout the Rocky Mountains. Land use along the Front Range of Colorado and Wyoming includes farming, ranching, recreation, industrial, suburban and urban development, golf courses, and parklands.

The Front Range, especially in Colorado, is an area of rapidly expanding residential development, and associated recreation, transportation, and commercial development that is replacing many traditional farming, haying, and grazing activities. Where development occurs near streams, there are frequently significant impacts occurring within Preble's habitat. Traditional farming activities frequently removed riparian habitat that may have been occupied by the Preble's in the past. Haying and grazing may have had minimal to significant impacts to Preble's habitat depending upon the location, intensity, and timing of the haying or grazing. Some activities may have altered or removed riparian habitat to such a degree that is no longer suitable Preble's habitat. Other activities may impact the habitat, but may not be so serious as to preclude the continued presence of the Preble's.

Although, prohibitions on take of Preble's have been in effect since it was listed in 1998, few activities have been altered or halted despite the potential for take. Surveys have been undertaken to determine presence of the Preble's and a few HCP's have been developed. Several counties have undertaken efforts to develop a county-wide HCP. Otherwise, most activities have continued unchanged since the species' listing.

ENVIRONMENTAL CONSEQUENCES

Section 9 prohibitions against take of listed species apply to any activity within the species range that may result in take. An activity that does not result in take, whether outside or within the species habitat, is not subject to take prohibitions. Section 9 does not prohibit the activity itself, but rather prohibits the take of listed species that may result from the activity. This proposal exempts certain activities that may take Preble's from section 9 prohibitions. The discussions in this section apply only to those activities conducted in Preble's habitat that may result in take.

It is important to understand that take of Preble's otherwise prohibited under section 9 may be allowed on private lands and other non-Federal lands through a section 10 permit and an associated HCP. On Federal lands, take may be permitted through consultation conducted under section 7 of the Act. This proposal applies to take on non-Federal lands and the analysis of environmental consequences is limited to those on non-Federal lands.

In the absence of any exemptions, individuals planning to undertake an activity on non-Federal lands that may result in take of Preble's have three legal choices. They may—(1) modify their activity to avoid take, (2) choose to cancel the project or move it to a new location, or (3) obtain a section 10 permit (with an accompanying HCP). These choices apply to all of the alternatives discussed below.

Also, it is important to understand that the degree of take that results from human activities will vary. Of the activities undertaken within or adjacent to the Preble's habitat, some have little or no likelihood of take, some take minimal numbers of Preble's, and others take larger numbers of Preble's. In the past, habitat alteration and take has extirpated the Preble's from certain localities. In other situations, the degree of habitat alteration and the amount of take has been less extreme and the species may persist at that location, although possibly at a reduced population level. In still other situations, the degree of habitat alteration and the amount of take, even if occurring annually, may be small enough that the size of Preble's population at that location has not been affected. The alternatives (other than the No Action Alternative) propose exemptions for certain categories of activities with minimal levels of take, including take on an annual basis, that does not affect the species long-term persistence in the locality. For some categories, only existing activities are exempted. Activities within these categories that are new or expanded beyond existing levels (such as increasing the size of a cultivated field) are not covered by the exemptions, since they could result in larger amounts of take.

ALTERNATIVE A - No Action Alternative

Under this alternative, no 4(d) rule will be prepared and existing section 9 prohibitions on take of Preble's would remain in place. Any take of Preble's incidental to an otherwise legal activity must be permitted through an HCP and associated section 10 permit, as is currently required. Alternatively, activities could be modified to avoid take. Although some activities might be easily modified to avoid take, others may be more difficult to modify. Under this alternative, any activity that results in take of Preble's, unless the take is covered by a section 10 permit, would be a violation of section 9 take prohibitions.

Socio-economic Impacts—In general, maintaining take prohibitions can increase costs to people undertaking activities that impact Preble's habitat and result in take of Preble's. It may be necessary for people to survey potential habitat in locations of proposed projects in order to verify the presence or absence of Preble's. If the species is present, individuals may avoid take by altering their activities. These alterations may be negligible, they may be inconvenient, or they may create costs due to modification, delay, or cancellation of the planned activity. We do not

know how many activities will, in actuality, be altered to preclude take. Many counties and some individuals will likely undertake efforts to develop HCP's and apply for section 10 permits to take the Preble's.

Impacts on Preble's—Maintaining take prohibitions under this alternative may reduce the total number of individuals taken and may reduce the total amount of habitat impacted by human activities. However, because take can be allowed through an HCP and associated section 10 permit, impacts to the Preble's will still occur. These impacts will, for the most part, be mitigated under any HCP. Unpermitted take also will likely occur, but would be illegal under section 9 take prohibitions.

Impact on Other Listed Species and Other Wildlife—To the degree that maintaining prohibitions lessens the amount of habitat lost, this will benefit other wildlife that depend on riparian habitats. Two listed plants could benefit; the Ute ladies' tresses and the threatened Colorado butterfly plant. In those cases where the habitat is impacted, either because there is no take, take is permitted, or because unpermitted take occurs, then the amount of habitat lost and resulting impacts to these other listed species and other wildlife may not be lessened. In these cases, maintaining prohibitions will not alter the amount of habitat loss. Whether or not maintaining take prohibitions lessens habitat loss is dependent upon how much the prohibitions change existing human use patterns.

Cumulative Impacts—Because these prohibitions apply to the entire range of the Preble's, the discussion of impacts above include cumulative effects. Take from various kinds of human activities may be permitted under HCP's and associated section 10 permits and would cumulatively impact the Preble's throughout its range. However, in providing a section 10 permit, the Service must ensure that the species' continued existence is not jeopardized, that the amount of take is minimized, and that the take is appropriately mitigated. Take also may result from Federal actions and the Service must ensure, through section 7 consultation, that the species continued existence is not jeopardized and the amount of take is minimized. Therefore, cumulative impacts from permitted take on the Preble's will not be significant. Some additional take of Preble's may occur from activities not covered by a section 10 permit—if so, these activities are violation of the section 9 prohibitions.

ALTERNATIVE B - Proposed 4(d) Rule

Designating Mouse Protection Areas

Under this alternative, MPA's and PMPA's would delineate areas where Preble's are known or likely to occur and where activities are likely to result in take. Under this alternative, take is prohibited within designated MPA's and PMPA's, but is exempt outside of them. Prohibitions on take of Preble's within MPA'S and PMPA'S would typically not prevent a project from occurring, because the project could be modified to avoid take or take could be permitted through a section 10 permit and associated HCP. This alternative includes an option for a local

government (city, county, State) to review and approve projects within their jurisdiction to ensure that cumulative total impacts to Preble's habitat within the MPA does not exceed 4 percent and to assure that appropriate mitigation occurs. During the 18-month duration of this alternative, a section 10 permit would not be needed for take that results from a project within an MPA where such local review had occurred. Without such local review and assurance, any take resulting from a project within an MPA would still need to be permitted through a section 10 permit and associated HCP. The intent of this proposal would be to gain the county as a partner in reviewing projects and in minimizing impacts to Preble's, and to provide an incentive to project sponsors to reduce impacts, particularly from large projects that could otherwise impact more than 4 percent of the habitat within an MPA.

Activities outside of MPA's and PMPA's would be exempt from any take prohibitions and neither permits nor modifications to avoid take would be needed.

Socio-economic Impacts—Under this alternative, it would not be necessary for people to survey Preble's habitat within locations of proposed projects occurring within MPA's. Some surveys in PMPA's may still be needed in order to verify the presence or absence of Preble's. No surveys would be needed for activities outside of MPA's and PMPA's.

For those activities reviewed and approved by local jurisdictions that do not result in a cumulative habitat loss of more than 4 percent of Preble's habitat within an MPA, take of Preble's would not be prohibited. Such activities would not need a section 10 permit and associated HCP in order to take Preble's nor would they need to be modified in order to avoid take of Preble's. There would be costs to counties associated with developing a county-wide agreement, conducting project review, and monitoring compliance. There could be additional costs to individuals associated with review of projects by local jurisdictions, but this cost would likely be less than that associated with development and implementation of an individual HCP.

Projects impacting Preble's that are not reviewed and approved by the local jurisdiction and those that exceed the 4 percent habitat loss within an MPA would need to be covered by an HCP and section 10 permit for take of Preble's. Costs for developing of an HCP would vary with the size and complexity of the HCP.

Activities outside MPA's or PMPA's would be exempted from take prohibitions and no section 10 permit and HCP would be required for any take of Preble's.

Impacts to the Preble's—Inside MPA's, review of projects by local jurisdictions, if it occurred, would generally limit impacts to Preble's to the loss of a maximum of 4 percent of the habitat within the MPA, with mitigation to replace the loss over time. Under the No Action Alternative, such take could still occur if covered by an HCP and an associated section 10 permit, with mitigation required by the HCP. Therefore, this exemption may is not expected to increase impacts to Preble's compared to the No Action Alternative.

By keeping habitat loss under 4 percent and in requiring mitigation, this alternative provides an incentive for project sponsors to reduce the impact to Preble's that may occur from their projects. This applies particularly for large projects, such as urban development or road construction, that could easily exceed loss of 4 percent of the Preble's habitat. Reducing the amount of impact below 4 percent would benefit the Preble's in one or more MPA's.

This alternative would exempt all activities occurring outside of MPA's or PMPA's from take of Preble's. Since most Preble's habitat is within MPA's or PMPA's, this exemption is believed to result in very little take. Some commentors expressed concern that there is not sufficient knowledge about the distribution of Preble's to be certain that sizeable populations of Preble's do not exist outside of the designated MPA's or PMPA's. If this were the case, then removing all take prohibitions outside of MPA's and PMPA's could increase the amount of individual Preble's that could legally be taken without an HCP and associated section 10 permit.

Impacts to Other Listed Species and Other Wildlife—The loss of up to 4 percent of Preble's habitat within an MPA would negatively impact other listed species or wildlife within the same riparian habitat. However, because this can occur through a section 10 permit and associated HCP under the No Action Alternative, there is no additional impact. The removal of the need for an HCP and section 10 permit for take resulting from activities reviewed by the county and affecting a cumulative total of no more than 4 percent of the Preble's habitat within an MPA may provide incentives to reduce the loss of Preble's habitat within one or more MPA. This would benefit other listed species and other wildlife that occur in the same habitat area. Allowing take outside of MPA's and PMPA's could adversely impact the two listed plant species if they occur in areas that also are occupied by Preble's.

Exemption for Categories of Activities

This alternative also establishes four categories of activities that are exempt from prohibitions on take anywhere within the Preble's range. Activities within each of these four categories would not have to be modified in order to avoid take of Preble's, nor would they need an HCP and associated section 10 permit.

1. Rodent Control

Under this alternative no prohibitions on take of Preble's would apply to rodent control activities in or within 10 feet of structures. People conducting such rodent control activities would not have to be concerned whether they might be in Preble's habitat.

Socio-economic Impacts—Under this alternative, surveys to determine whether Preble's is present will not be necessary in areas where rodent control in or near structures is planned. Also, in areas where Preble's are known to occur, modification of rodent control methods will not be necessary, nor would an HCP or associated section 10 permit be needed. The

primary benefit of the exemption is to assure landowners that they will be able to control house mice, rats, and other rodent pests around homes, barns, and other structures that may be within Preble's habitat without the cost of surveys or an HCP.

Impact to the Preble's—Preble's are not likely to occur within buildings or other structures and in most cases there is little native shrub vegetation around such structures that could be used by them. Therefore, most rodent control is unlikely to cause take of Preble's and this exemption is unlikely to substantially increase take or other impacts to Preble's. Although on rare occasion an individual Preble's might be killed through rodent control in or around structures, this will have no impact to the Preble's population as a whole.

Furthermore, take of Preble's from rodent control activities could still occur without this exemption. Take of Preble's could either be permitted through an HCP and associated section 10 permit, or may occur from rodent control activities that have received no take permits. This exemption is believed to have minimal additional impact on the Preble's compared to the No Action Alternative.

Impacts to Other Listed Species and Other Wildlife—Exempting rodent control from take prohibitions is not believed to impact or benefit other listed species or other wildlife compared to the No Action Alternative.

2. Ongoing Agricultural Activities

Various types of agricultural activities are conducted within the range of the species. The effects of these activities on Preble's and the consequences of take exemptions will vary with the type of activity and preexisting site specific conditions.

A. Row Crops

In general, Preble's are not believed to occur within areas that are cultivated for row crops and continuation of existing farming of row crops is not expected to take Preble's; therefore, there are not likely to be any take prohibitions applicable to ongoing row crop production, which this exemption would remove.

Socio-economic Impacts—This exemption has no monetary benefit to ongoing row crop production. This exemption primarily provides assurances to producers that crop production can continue without any likelihood of causing an illegal take of the Preble's.

Impacts to Preble's—No impacts to Preble's will occur from this exemption as it applies to row crops.

Impacts to Other Listed Species and Other Wildlife—This exemption will not alter existing row crop production methods or their current impacts to other listed species or wildlife.

B. Hay

Native grass hayfields and alfalfa may be used by Preble's if the hay field is adjacent to or in suitable riparian habitat. Mowing of native hay or alfalfa may take Preble's if they occur within the hayed area. This exemption removes prohibitions on take of Preble's that might result from ongoing haying in Preble's habitat and provides certainty to hay producers that current haying operations would not be a violation of section 9 take prohibitions. This exemption does not apply to new or expanded haying operations.

Socio-economic Costs—Under this alternative, no surveys would be needed to verify presence or absence of Preble's in hayfields. Costs of modifying haying methods or costs of developing an HCP would not be incurred under this exemption and methods of mowing native hay or alfalfa would remain unchanged.

Impacts to Preble's—Preble's that occur in riparian vegetation along streams are known to extend into adjacent uplands and therefore they may be taken by haying operations. Haying is a temporary loss of habitat and may impact Preble's through the loss of seed production, a source of food for Preble's. The continued presence of Preble's within fields that have been hayed for a number of years, indicates that the population is persisting despite the haying activity. Take of Preble's from haying operations could be permitted through an HCP and associated section 10 permit under the No Action Alternative, but mitigation to reduce the impact would be required. Mitigation would not be required under this exemption. This exemption is believed to have minimal additional impacts to the Preble's compared to the No Action Alternative.

Impacts to Other Listed Species and Other Wildlife—Because take of Preble's on many of the hayed acres within Preble's habitat could be permitted through an HCP and associated section 10 permit under the No Action Alternative, this exemption is not anticipated to alter the impacts from haying activities on other listed species and other wildlife compared to the No Action Alternative.

C. Grazing

Grazing has occurred within Preble's habitat for many decades and populations of Preble's still occur within some grazed areas adjacent to streams. In these locations, grazing may take Preble's through habitat degradation or loss. This exemption recognizes those grazing regimes that have maintained habitat overall, but that may result in small levels of take.

Socio-economic Impacts—Most ranchers who have been grazed livestock under a regime in which the Preble's has persisted are causing minimal levels of take. Under this alternative, take caused by ongoing grazing would be exempted. No surveys to determine whether the Preble's is present would be required and any costs that might otherwise be needed to avoid take of Preble's, or to permit take of Preble's (through development of an HCP) would not be incurred. The primary benefit of the rule to landowners and businesses is in providing assurances they will be able to continue existing ranching practices.

Impacts to Preble's—Take of Preble's may be resulting from current grazing operations. Grazing may cause varying degrees of impact to Preble's habitat, depending upon the intensity of grazing, and could be reducing Preble's populations. This exemption would legalize the take that is believed to be resulting annually from current grazing operations. Take of Preble's resulting from grazing could be permitted through an HCP and associated section 10 permit. Mitigation would be required by the HCP to reduce the impact to the Preble's population. Mitigation would not occur with this exemption. Over the short-term time frame of this rule, this exemption is not expected to have significant impacts to Preble's.

Impacts to Other Listed Species and Other Wildlife—To the degree that exempting take of Preble's resulting from grazing reduces riparian habitat, it will impact the two listed plants and other wildlife occupying the same riparian habitat.

3. Maintenance of Existing Landscaping

Under this alternative, existing landscaping activities are exempted from prohibitions on take of Preble's. Take of Preble's from maintaining existing landscaping will be minimal because Preble's rarely use landscaped areas. Most landscaping activities can be undertaken without take of Preble's.

Socio-economic Impacts—Without this exemption, surveys might be needed to verify presence or absence of Preble's and in a few locations, alterations or cessation of landscaping activities might be needed to avoid take of Preble's, which could result in minor costs or inconvenience to landowners. Under this alternative, no surveys would be needed to verify presence of Preble's and no alterations of existing landscape maintenance activities would be needed to avoid take. Since the mouse rarely uses landscaped areas, this exemption provides only minimal economic benefits to landowners within the Preble's range. The primary benefit of this exemption is to assure landowners that they can continue with existing landscape maintenance activities without fear of taking Preble's.

Impacts to the Preble's—Since Preble's rarely use landscaped areas, this exemption is believed to result in minimal amounts of take and to have no impact to the overall Preble's population.

Impacts to Other Listed Species and Other Wildlife—Exempting take of Preble's from landscaping activities is not expected to substantially increase loss or degradation of riparian habitat or to impact other listed species and other wildlife.

4. Ongoing Use of Existing Water Rights

Under this alternative, ongoing use of existing water rights would be exempted from take prohibitions. Existing water diversions may reduce or increase Preble's habitat depending on amount and timing of diversions, stream geomorphology, precipitation, and other factors. Therefore, exempting the ongoing use of existing water has variable environmental consequences. In some locations, past water diversions have significantly reduced riparian habitats and caused the extirpation of Preble's. In these situations take would not occur; therefore, there would be no environmental consequences resulting from exempting such existing water diversions. In other locations where water diversions have had smaller impact to Preble's habitat, Preble's may persist. There may be environmental consequences from exempting these existing water diversions.

Socio-economic Impacts—With this exemption, surveys would not be needed to verify presence or absence of Preble's. Where Preble's are present, evaluation of the effects of existing water diversions would be not be needed and alterations in flooding or pumping activities to avoid take of Preble's also would not be needed. No HCP and associated section 10 permit would be needed to cover take from existing water diversions.

Any impact to Preble's on a specific stream or reach, would typically be caused by the cumulative impacts of numerous diversions. Modifications in water use necessary to avoid take would be spread among the many diversions so the economic cost to any one water user would be small. The benefits of this exemption in not having to modify water diversions, also would be spread out among many water users such that the benefit to each individual water user would be small. Therefore, there would be little measurable economic benefit from the exemption.

Impacts to Preble's—Impacts to streams and Preble's habitat from diversion of water will vary depending upon the amount and timing of diversions, stream geomorphology, precipitation, and other factors. Flows in some streams may be so significantly reduced from historic diversions that the riparian habitat has been reduced or eliminated. In such areas where Preble's is no longer be present, no take would result from continuing such diversions. Exempting diversions in these situations would not impact the Preble's. Flows in other streams may be only moderately or minimally reduced and the riparian vegetation may be largely retained and Preble's may still be present. Flows in some streams may increase species habitat or actually create species habitat in areas where it would not have existed

naturally. Continuing use of existing water diversions on stream systems where the Preble's still exists may result in some limited take. Diversion of water from one stream may cause flooding of habitat along streams receiving the water. If these areas include habitat occupied by the Preble's, take could occur.

Removing the need to modify existing water diversions to avoid take under this exemption could, in some situations, impact Preble's. However, take of Preble's from water diversion can be permitted through an HCP and associated section 10 permit allowed under the No Action Alternative. Take would be mitigated through the HCP process, which would not occur if the water diversion is exempted. This exemption would be likely to have increased impacts compared to the No Action Alternative, but the increase is not believed to be substantial.

Impacts to Other Listed Species and Wildlife—To the degree that exempting prohibitions on take of Preble's from water diversions increases loss of riparian habitat this would impact other listed species and other wildlife occurring in the same riparian habitat.

Cumulative Impacts—The only known cumulative impacts that may result from this alternative is the potential for loss of 4 percent of the Preble's habitat within MPA's throughout the species' range. However, this loss is believed to be less than what might occur through HCP's and associated section 10 permits under the No Action Alternative. Otherwise the cumulative impacts of this alternative is similar to the No Action Alternative.

ALTERNATIVE C

This alternative exempts from take the same four categories of activities identified in Alternative B (rodent control, existing agricultural activities, landscaping, and ongoing use of existing water rights). Activities within each of these four categories would not have to be modified to avoid take. The effects of this alternative are the same as those described for these four exemptions under Alternative B. As this alternative does not establish MPA's and PMPA's, it has none of the effects identified in Alternative B that are associated with these designated areas. The cumulative impacts of this alternative are the same as Alternative B minus the cumulative impacts within MPA's.

ALTERNATIVE D - Preferred Alternative

This alternative exempts six categories of activities from prohibitions on take. Four of the categories (rodent control, existing agricultural activities, landscaping, and water diversions) are the same as those identified in Alternative B. The effects of these four categories of exemptions are the same as described in Alternative B. Two additional categories of activities, ditch maintenance and noxious weed control, that are exempt from prohibitions on take of Preble's are included in this alternative. The environmental consequences of these two additional exemptions are discussed below:

1. Ditch Maintenance

Under this alternative, ditch maintenance is exempted from take prohibitions, with two principal conditions (1) all ditch maintenance in total does not impact more than one-quarter mile of riparian shrub habitat per linear mile of ditch in any 1 calendar year, and (2) if burning is the chosen method of ditch maintenance, it must be conducted during the Preble's hibernation season (November 1 through April 30).

Socio-economic Costs—Under this alternative no surveys would be needed to document the presence or absence of Preble's in potential habitat areas. Also, take of Preble's associated with ditch maintenance activities that meet the two conditions above, will not be prohibited and no alteration, delay, or cessation of ditch maintenance would be needed to avoid take. No HCP or associated section 10 permit would be needed for ditch maintenance activities that meet the two conditions above. Maintenance activities contribute to the long-term function of the ditch. Current State regulations require ditch owners to maintain ditches in good repair. This exemption avoids (only during the 3-year term of these regulations) the need for mitigation through a HCP from required ditch maintenance and it prevents the perception of conflict with existing state regulations requiring ditch maintenance.

Impacts to Preble's—The limitation for impacting no more than one-quarter of a mile of riparian shrub habitat per mile of ditch in any 1 calendar year reduces the potential for ditch maintenance to impact habitat Preble's in any 1 year. Nevertheless, this degree of loss could still be a substantial impact to Preble's habitat; however, the habitat lost due to ditch maintenance is not believed likely to be substantial for several reasons. First, many ditches have been recently maintained and would not likely again require maintenance during the 3-year term of these proposed regulations. Second, the Preble's has been persisting along ditches that have undergone decades of ditch maintenance activity; therefore, there is no reason to believe that exempting the normal and customary ditch maintenance activity under this alternative would suddenly prevent the persistence of Preble's along most ditches. Third, even if ditch maintenance is conducted in each of the 3 years covered by these proposed regulations, by the time the third section of ditch is maintained in the third year, some habitat will regrow along the section of ditch maintained in the first year.

Even without this exemption, take resulting from ditch maintenance could be permitted under an HCP and associated section 10 permit allowed under the No Action Alternative. Mitigation of this impact would be required under an HCP, but is not required for this exemption. Therefore, this exemption is expected to increase impacts to the Preble's compared to the No Action Alternative.

On the other hand, exempting some maintenance of ditches could be beneficial to Preble's. If ditches are not maintained they would at some point no longer be used to convey water. Without water, the habitat for Preble's along the ditches would cease to exist.

Impacts to Other Listed Species and Other Wildlife—Ditch maintenance activities are unlikely to impact populations of the threatened orchid, the Ute ladies' tresses. Ditches are artificially created habitats and most ditches are unlikely to be colonized by these plants. Exempted ditch maintenance activities would remove riparian habitat and would impact other wildlife species that occupy the riparian shrub habitat growing along the ditches.

2. Control of Noxious Weeds

Herbicides used to control noxious weeds, if properly applied, should not affect Preble's, although the application of herbicides for noxious weeds may reduce cover or seed production of non-target broad-leaf plants that provide shelter or food for Preble's.

Socio-economic Impacts—This exemption will avoid the costs associated with surveys to verify Preble's presence or absence and with development and implementation of an HCP and associated section 10 permit to take Preble's. It benefits landowners by removing a disincentive for controlling noxious weeds that are costly public nuisances.

Impacts to Preble's—Take of Preble's may result from activities to control noxious weeds under this exemption. Take of Preble's that results from control of noxious weeds may be permitted under an HCP and associated section 10 permit allowed under the No Action Alternative. Therefore, this exemption is believed to have minimal additional adverse effects on the Preble's compared to the No Action Alternative. To the degree that this exemption actually increases the amount of noxious weed control undertaken, this would benefit Preble's by improving its habitat.

Impacts to Other Listed Species and Other Wildlife—Herbicide application to control noxious could weaken or kill the Colorado butterfly plant but would not be expected to affect the Ute ladies' tresses. Removal of noxious weeds from Preble's habitat would benefit both listed plant species as well as other wildlife that occupies the same riparian habitat. To the degree that this exemption actually increases the amount of noxious weed control undertaken, this would benefit these other species by improving their habitat.

Cumulative Impacts—The cumulative impacts of this alternative are the same as those in Alternative C.

ENVIRONMENTAL JUSTICE

Executive Order 12898 of February, 1994 entitled "Federal Action to Address Environment Justice in Minority and Low Income Populations" requires Federal Agencies to take action to the extent practicable and permitted by law, to make achieving environmental justice part of its mission by identifying and addressing as appropriate disproportionately high and adverse human health effects of its programs and policies and activities on minority populations and low-income populations. This assessment has not identified any adverse or beneficial effects unique to minority or low-income populations in the affected areas.

SUMMARY OF IMPACTS BY ALTERNATIVE

	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D
Socio-economic Impacts	No exemptions to take prohibitions. Costs to landowners to survey presence of Prebles, to modify or abandon actions, or to develop and implement an HCP/Section permit.	Exempts certain activities from take prohibitions. No costs to landowners to survey, modify project, or develop HCP's required for these exempted activities. Additional costs may result from increased coordination with local jurisdictions for activities within MPA's/PMPA's.	Exempts certain activities from take prohibitions. No costs to landowners to survey, modify project, or develop HCP's required for these exempted activities. No additional costs for increased coordination with local jurisdictions for activities within MPA's/PMPA's.	Increases kinds of activities exempted from take prohibitions and increases situations where costs to survey, modify projects, or develop HCP's are not required.
Impacts on Preble's	Maintains existing take prohibitions. Take permitted by HCP/Section 10 permit must be mitigated. Regulatory burden may be a disincentive to conservation. Unpermitted take may be occurring	Exempts certain activities from take prohibitions. No mitigation required for take resulting from exempted activities. Local review of projects may reduce impacts and level of take. Decreasing regulatory burden may increase voluntary conservation measures. Unpermitted take may still occur.	Exempts certain activities from take prohibitions. No mitigation required for take resulting from exempted activities. Decreasing regulatory burden may increase voluntary conservation. Unpermitted take may still occur.	Increases kinds of activities exempted from take prohibitions. No mitigation required for take resulting from exempted activities. Larger reduction in regulatory burden may further increase voluntary conservation. Unpermitted take may still occur.

SUMMARY OF IMPACTS BY ALTERNATIVE

	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D
Impacts on other Listed Species or Wildlife	To the degree that maintaining prohibitions protect riparian habitat, other species will also benefit. Project modifications to avoid take may benefit other species. Impacts to other species may still result from HCP actions required to reduce/mitigate take may benefit other species or may have no affect on other species.	Exempted activities may impact other species or may have little or no affect.	Exempted activities may impact other species or may have little or no affect.	Exempted activities may impact other species or may have little or no affect.
Cumulative Impacts	Take from various human activities may be permitted under HCP's/Section 10 permits cumulatively impacting Preble's throughout its range.	Loss of 4 percent of habitat within MPA's throughout Preble's range. Within MPA's, loss expected to be less than loss otherwise occurring through activities permitted through HCP/Section 10 permits. Cumulative effects of exempted activities similar to Alternative A.	Cumulative effects of exempted activities similar to Alternative A.	Cumulative effects of exempted activities similar to Alternative A.